

names for the various classes, owing to the great variety of shapes of the work to be drilled. There are*, however, two general types that are most commonly used, the difference between them being very marked. These types may be classified as *open jigs* and *closed jigs*, or *box jigs*. Sometimes the open jigs are called *clamping jigs*. The open jigs usually have all the bushings in the same plane, parallel with one another, and are not provided with loose or removable or leaves, thereby making it possible to insert the piece to be drilled without any manipulation of the parts of the jig. These jigs are often of such a construction that they are applied to the work to be drilled, the jig being placed on the work, rather than the work being placed in the jig. The jig may lie held to the work by straps, bolts, or clamps, but in many cases the jig fits into or over some finished part of the work and in this way the jig is located and held in position.

The closed drill jigs, or box jigs, frequently resemble some form of a box and are intended for pieces where the holes are to be drilled at various angles to one another. According to rule, the piece to be drilled can be inserted in the jig only after one or more leaves or covers have been swung out of the way. Sometimes it is necessary to remove a loose wail, which is held by bolts and dowel pins, in order to locate the piece¹ in the jig*. The work in the closed drill jig may be held in place by set-screws, screw bushings, straps, or hook-bolts.

The combination drilling and boring jig is another type of closed jig designed to serve both for drilling and boring operations. Before designing a combination drill and jig,

the relation between, and number of, the drilled and holes must be taken into consideration, and also the ske of the piece to be machined. In case there is a number of it may be of advantage to have two or even more jigs for the same piece, because- it makes it easier to and the jig, and very likely wUl give a better result. The

drilled or bored in the first jig may be used as a means for

the piece in the jigs used later on. Combination drill and jigs axe not very weE adapted for pieces of large *mm**